

Application No.: 10/540,662
RCE dated: January 14, 2009
Reply to final Office Action of October 14, 2008
Attorney Docket No.: 0065.0002US1

Amendments to the Specification

Please replace paragraph [0058] with the following amended paragraph:

[0058] 4. Sulfuric acid saturated with nitrous gases enters the denitrator (FIG. [[2]] 1, pos. 5), where thermal and chemical decomposition of nitrosyl sulfuric acid, HNSO_5 , occurs with formation of the initial acid and nitrous acid, HNO_2 . The decomposition takes place largely as a result of heating, but chemical denitrating agents, like alcohols, formaldehydes and other chemical reducing agents, can also be used for sulfuric acid denitration. High temperature (up to 250°C .) and the chemical substances give rise to nitrosyl sulfuric acid and nitrous acid decomposition with evolution of N_2O_3 , which in its turn at this temperature provides equimolar mixture of NO and NO_2 . The gas mixture is fed to the oxidation reactor (FIG. [[2]] 1, pos. 1), where oxidation of sulfide concentrates stems from the effect of nitrous acid formed upon interaction between nitrous gases and the slurry water.

Please replace paragraph [0061] with the following amended paragraph:

[0061] When pure oxygen is used for NO oxidation in regeneration, the hardware block diagram is much simpler, as there is no necessity to remove inert nitrogen of the air from the system. Meanwhile, implementation of a separate regeneration oxidizer (FIG. [[2]] 3, pos. 3) is an essential element of our new technology, as it permits regeneration by NO converting into N_2O_3 and avoiding nitric acid accumulation in the slurry. Oxygen feeding directly to the oxidation reactor will give rise to parallel formation of nitric and nitrous acids, since the conditions of concentrates oxidation ($65\text{--}85^\circ\text{C}$ [[.]] and conditions of nitric acid regeneration differ in temperature and pressure.